

Claims:

Cancel Claims 1-20

Claim 21 (New) A method for implementing a first business process for a business to business protocol defined for integration with a business system comprising:

a user;

a business to business protocol including:

definition of receipt and transmission of messages using a business to business network;

definition of the first business process including:

a first state, a second state, and a state transition for the first business process from the first state to the second state with entry of a first entered data;

an inbound message format for the first state including display data; and

an outbound message format for the second state including entered data;

where the method comprises:

defining a Protocol means including:

receiving and transmitting messages supporting the business to business protocol using a business to business network, including the internet;

a state machine for:

receiving an inbound message including display data when in the first state;

displaying the display data from an inbound message to the user;

accepting an entered data input from the user;

changing the state from the first state to the second state based on the defined state transition; and

sending an outbound message with the entered data;

using the Protocol means for the steps of:

receiving an inbound message with the state machine in the first state;

Confidential Application No. 09/930,933 N. K. Ouchi 2/13/2006 Page 3 of 14

the user viewing first displayed data from the inbound message;
the user entering a first entered data;
sending an outbound message containing the first entered data; and
moving the state machine to the second state;
such that the user executes the first business process for the business to
business protocol.

Claim 22 (New) The method of Claim 21 including a business system which
provides user data entry and displays response data to the user in response to
the data entry where the method is extended to include:

the user entering the displayed data from the Protocol means into the
business system;
the business system displaying response data; and
the user entering the response data from the business system into the
Protocol means as the first entered data,.

Claim 23 (New) The method of Claim 21 including a business system, connected
by a message network to the Protocol means, which provides user data entry
and transmits a response data message including response data as response to
the entered data where the method is extended to include:

modifying the Protocol means to accept response data in a transmitted
response data message as first entered data;
the user entering the displayed data from the Protocol means into the
business system;
the business system transmitting the response data in the response data
message; and
accepting the response data in the response data message from the
business system as the first entered data in the Protocol means.

Claim 24 (New) The method of Claim 21 including a business system, connected
by a message network to the Protocol means, which accepts a data entry
message and displays response data to the user as response to the data entry
message where the method is extended to include:

modifying the Protocol means

to store user entered filter data;
to compare display data with filter data; and
based on the compare, to transmit the display data in a data entry
message data entry message including display data from the
Protocol means to the business system;
transmitting a data entry message including display data from the Protocol
means to the business system;
the business system displaying the response data to the user; and
the user entering the response data from the business system into the
Protocol means as the first entered data.

Claim 25 (New) The method of Claim 21 including a business system, connected
by a message network to the Protocol means, which accepts a data entry
message and transmits a response data message including response data as
response to the data entry message where the method is extended to include:

modifying the Protocol means
to store user entered filter data;
to compare display data with filter data; and
based on the compare, to transmit the display data in a data entry
message data entry message including display data from the
Protocol means to the business system;
modifying the Protocol means to accept first data in a transmitted
response data message;
transmitting a data entry message including display data from the Protocol
means to the business system;
the business system transmitting the response data in the response data
message; and
accepting the response data in the response data message from the
business system as first entered data into the Protocol means.

Claim 26 (New) The method of Claim 21 is further extended to include:
modifying the Protocol means to store display and entry data;
defining the change to display and entry data for the first business process;

modifying the Protocol means to change the stored display and entry data based on the definition for the first business process such that the display and entry data stored in the Protocol means are consistent with the display and entry data for the first business process.

Claim 27 (New) The method of Claim 21 including a second business process where the business to business protocol further defines:

- the second business process:

- a third state, a fourth state, and a state transition of the second business process from the third state to the fourth state;

- an inbound message for the third state; and

- an outbound message for the fourth state;

where the method is further extended to include:

- modifying the Protocol means to store display and entry data from the first business process;

- defining the change to the display and entry data for the first process as display and entry data for the second business process;

- modifying the Protocol means to change the display and entry data for the first process to the display and entry data for the second process based on the definition of these changes;

so that display and entry data for the first business process are stored, changed, and used as display and entry data for the second business process.

Claim 28 (New) The method of Claim 21 including a second business process where the business to business protocol further defines:

- the second business process:

- a third state, a fourth state, and a state transition of the second business process from the third state to the fourth state;

- an inbound message for the third state;

- an outbound message for the fourth state; and

- the inter-process relationship such that at the completion of the first process the second process is initiated

where the method is further extended to include:

modifying the Protocol means to initiate the second process at the completion of the first process;
so that the first business process completes and the second business process is initiated.

Claim 29 (New) The method of Claim 21 where the first business process is further defined:

- a fifth state,
- a state transition for the first business process from the first state to the fifth state when fifth entered data are entered;

the Protocol means further providing:

a state machine transition from the first state to the fifth state when fifth entered data are entered,
such that:

- an inbound message is received while in the first state;
- the displayed data are viewed;
- fifth entered data are entered;
- an outbound message including fifth entered data is transmitted; and
- the state machine is in the fifth state.

Claim 30 (New) A business process system using a business to business protocol defined for integration with a business system comprising:

- a user;
- a computer with a user interface and connected to a business to business network capable of receiving and transmitting messages;
- a business to business protocol including definition of:
 - a first business process;
 - a first state, a second state, and a state transition for the first business process from the first state to the second state with entry of first entered data;
 - an inbound message format for the first state including display data;
 - and
 - an outbound message format including entered data;

a Protocol program executing in the computer providing a state machine for:

- receiving an inbound message while in the first state;
- displaying the display data in the message to the user;
- accepting entry of entered data by the user;
- changing the first state to the second state based on the defined state transition; and
- transmitting an outbound message with the entered data;

such that:

- an inbound message including display data is received while in the first state;
- the display data are viewed by the user;
- first entered data are entered by the user;
- an outbound message including first entered data is transmitted; and
- the state machine is in the second state;

such that the user executes the first business process using the business to business protocol.

Claim 31 (New) The system of Claim 30 including a business system which provides data entry and displays response data as response to the data entry where the system is extended to include:

- the user entering into the business system the displayed data from the Protocol program;
- the business system displaying response data; and
- the user entering the response data from the business system into the Protocol program as the first enter data.

Claim 32 (New) The system of Claim 30 including a business system, connected by a message network to the system, which provides user data entry and transmits a response data message including response data as response to the entered data where the system is extended to include:

- modifying the Protocol program to accept response data as first data in a transmitted response data message;
- the user entering into the business system the displayed data from the

Protocol program; the business system transmitting the response data in the response data message; and
accepting the response data in the response data message from the business system as first entered data into the Protocol program.

Claim 33 (New) The system of Claim 30 including a business system, connected by a message network to the system, which accepts a data entry message and displays response data to the user as response to the data entry message where the system is extended to include:

modifying the Protocol program

to store user entered filter data;

to compare display data with filter data; and

based on the compare, to transmit the display data in a data entry message;

transmitting a data entry message including display data from the Protocol program to the business system;

the business system displaying the response data; and

entering the response data from the business system into the Protocol program as the first entered data.

Claim 34 (New) The system of Claim 30 including a business system, connected by a message network to the system, which accepts a data entry message and transmits a response data message including response data as response to the data entry message where the system is extended to include:

modifying the Protocol program

to store user entered filter data;

to compare display data with filter data; and

based on the compare, to transmit the display data in a data entry message;

modifying the Protocol program to accept first entered data in a transmitted response data message;

transmitting a data entry message including display data from the Protocol program to the business system;

the business system transmitting the response data in the response data message; and

accepting the response data in the response data message from the business system as first entered data into the Protocol program.

Claim 35 (New) The system of Claim 30 is further extended to include:

modifying the Protocol program to store display and entry data;

defining the change to display and entry data for the first business process;

modifying the Protocol program to change the stored display and entry data

based on the definition for the first business process such that

the display and entry data stored in the Protocol program are consistent with the display and entry data for the first business process.

Claim 36 (New) The system of Claim 30 including a second business process where the business to business protocol further defines:

the second business process:

a third state, a fourth state, and a state transition of the second business process from the third state to the fourth state;

an inbound message for the third state; and

an outbound message for the fourth state;

where the system is further extended to include:

modifying the Protocol program to store display and entry data from the first business process;

defining the change to the display and entry data for the first process as display and entry data for the second business process;

modifying the Protocol program to change the display and entry data for the first process to the display and entry data for the second process

based on the definition of these changes;

so that display and entry data for the first business process are stored, changed, and used as display and entry data for the second business process.

Claim 37 (New) The system of Claim 30 including a second business process where the business to business protocol further defines:

the second business process:

a third state, a fourth state, and a state transition of the second business process from the third state to the fourth state;
an inbound message for the third state;
an outbound message for the fourth state; and
the inter-process relationship such that at the completion of the first process the second process is initiated

where the system is further extended to include:

modifying the Protocol program to initiate the second process at the completion of the first process;

so that the first business process completes and the second business process is initiated.

Claim 38 (New) The system of Claim 30 where the first business process is further defined:

a fifth state,
a state transition for the first business process from the first state to the fifth state when fifth entered data are entered;

the Protocol program further providing:

a state machine transition from the first state to the fifth state when fifth entered data are entered,

such that:

an inbound message is received while in the first state;
the displayed data are viewed:
fifth entered data are entered;
an outbound message including fifth entered data is transmitted; and
the state machine is in the fifth state.

Claim 39 (New) A method for selectively integrating a business process using a business to business protocol defined for integration with a business system comprising:

a user;

a business to business protocol including:

definition of receipt and transmission of messages using a business to

business network including the internet;

definition of a first business process:

a first state, a second state, and a state transition for the first business process from the first state to the second state with entry of first entered data;

an inbound message format for the first state including display data; and

an outbound message format for the second state including entered data;

defining a first display data for system integration and a second display data for user display;

a business system, connected by a message network to a Protocol means, providing:

receiving a message including first display data and sending a message including entered data;

accepting second display data entry and displaying entered data;

where the method comprises:

defining a Protocol means including:

receiving and transmitting messages for the business to business protocol using a business to business network;

a state machine for:

receiving an inbound message including either first display data or second display data in the first state;

when the inbound message includes first display data:

sending a message including first display data to the business system;

receiving a message including entered data from the business system;

accepting entered data in the message as entered data;

when the inbound message includes second display data:

displaying the second display data from an inbound message to the

user;
accepting an entered data input from the user;
when the inbound message includes either first display data or second display data:
changing the state from the first state to the second state based on the defined state transition; and
sending a outbound message with the entered data in the outbound message format;
using the Protocol means for the steps of:
receiving an inbound message;
when the inbound message includes first display data:
sending a first message including first display data to the business system;
the business system receives the first message including display data and responds with a second message including entered data;
receiving the second message including entered data from the business system;
accepting entered data in the message as entered data;
when the inbound message includes second display data:
displaying the second display data from the inbound message to the user;
the user entering the second display data in the business system;
the user viewing the entered data displayed by the business system;
the user entering the displayed entered data;
when the inbound message includes either second display data or first display data:
sending an outbound message containing the entered data;
such that the first business process is implemented using the business to business protocol.

40 (New) The method of Claim 39 is further extended to include:
modifying the Protocol means to store display and entry data;
defining the change to display and entry data for the first business process;
modifying the Protocol means to change the stored display and entry data based
on the definition for the first business process such that
the display and entry data stored in the Protocol means are consistent with the
display and entry data for the first business process.